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In the Supreme Court of the United States

OCTOBER TERM, 1929

NO. 12, ORIGINAL

STATE OF NEW YORK,

Complainant,

vs.

STATE OF ILLINOIS AND SANITARY DISTRICT OF CHICAGO,

Defendants.

COMPLAINANT'S SUBSTITUTE EXCEPTIONS TO THE REPORT OF THE SPECIAL MASTER ON RE-REFERENCE

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against
STATE OF ILLINOIS AND SANITARY DISTRICT OF CHICAGO,
Defendants.

COMPLAINANT'S SUBSTITUTE EXCEPTIONS TO THE REPORT OF THE SPECIAL MASTER ON RE-REFERENCE

Permission therefor having been granted, the complainant hereby submits its exceptions to the report of the Special Master on re-reference, in the stead of and in substitution for the exceptions heretofore filed in Original Causes Nos. 7 and 11 in which it joined; and for that purpose it hereby excepts to the findings of fact made and filed by the Special Master on the Re-Reference in this cause, to the failure or refusal of the Special Master to make and file findings of fact requested by said complainant on such Re-Reference, to the conclusions of law made and filed by the Special Master on said Re-Reference, to the recommendations for a decree made and filed by the Special Master on said Re-Reference and to the failure of the Special Master to make and file conclusions of law and recommendations for a decree requested by said complainant in the following particulars, to-wit:

EXCEPTIONS TO FINDINGS OF FACT

I.

Complainant excepts to the conclusion or finding of fact, appearing in duplicate on pages 34-35 (under designation of FIRST, Conclusion (1), and on page 141 (under the designation of Summary Conclusions (1), of the Report of the Special Master made and filed herein, which reads as follows, to-wit:

> "(1) That the completion of the North Side, West Side Calumet, and Southwest Side Sewage Treatment Works, above described, with their appurtenances and the necessary intercepting sewers, and the efficient operation of these plants, will afford practical measures from the standpoint of present sanitary engineering knowledge for the complete treatment of the dry weather flow of sewage and wastes of all the area comprised within the Sanitary District of Chicago, and also, in times of storm, of approximately 150% of the ordinary dry weather flow of sewage and wastes; that in the actual operation of these plants it may appear that a greater amount of the storm flow can be treated at least in part."

because said finding of fact (measured by the Master's interpretation of the relief which may be predicated upon such a program) is incomplete and not responsive to the order of Re-Reference of this Court dated January 14, 1929, in that said finding of fact does not provide a program for "the disposition of the sewage" of the Sanitary District of Chicago, "through other means than lake diversion," as required by said order of re-reference, but merely provides a program for the treatment of the sewage of the Sanitary District of Chicago by artificial processes without regard to whether other or additional structures are necessary to provide a program for "the disposition of the sewage through other means than lake diversion;"

and because if the Special Master were of the opinion that this program of works for the artificial treatment of the sewage of the Sanitary District of Chicago, unsupported by any auxiliary structures or measures, would not permit of the disposition of the sewage of the Sanitary District of Chicago without diversion, then, and in that event and in order to comply with the order of re-reference in this case, the Special Master should have found and included in said finding of fact and in his recommended program for "the disposition of the sewage" of the Sanitary District "through other means than lake diversion," a finding that the construction of water filtration works for all the domestic water supply of the City of Chicago, the extension of the waterworks intakes, the construction of a new water intake remote from the mouth of the Chicago River, the chlorination of the effluent of the sewage disposal plants, the construction of a separate system of sanitary sewers, the construction of outfall sewers or tunnels from the respective sewage disposal plants so as to divert the effluent wholly from the Chicago River and its auxiliary channels and/or the utilization of existing pumping stations or construction of new pumping stations to provide circulating water for the Chicago River and its auxiliary channels constitute (as to such of the foregoing works, structures and operations as he deemed essential) part or parts of a practical program for "the disposition of the sewage" of the Sanitary District of Chicago "through other means than lake diversion," that the construction, installation or operation of any or all of the foregoing structures or measures is practical, that any or all of said structures can be built and completed before December 31, 1938, and that the defendants be required to construct and place in operation any or all of said structures deemed essential to a practical program for "the disposition of the sewage" of the Sanitary District "through other means than lake diversion" before December 31, 1938.

As ancillary to and in support of the foregoing exception, complainant takes the following detailed exceptions to findings contained in the Master's Report:

I-A.

Complainant excepts to that portion of finding of fact First (3), appearing on page 23 of the Report of the Special Master, which reads as follows, to-wit:

> "The evidence does not, in my judgment, furnish a basis for a finding that enlargements are necessary in the sewage disposal plants as proposed in the program of the Sanitary District. The complainants state that the changes they propose in these plants relate to their operation. Mr. Howson said that his proposed modification would 'somewhat improve' the program, but that the modification was 'not essential.' Mr. Gascoigne assumed that the change he proposed 'would require no enlargement of the plants proposed to be built.' Mr. Townsend said that no enlargement would be required, 'but merely a different utilization of the preliminary treatment plant.' "

because, insofar as said finding of fact finds or implies any concession by complainant that the defendant should not be required to enlarge the sewage disposal plants as proposed in the program of the Sanitary District, and/or to so operate them as to give at least preliminary treatment to all storm water overflows up to the capacity of the intercepting sewers (4000 c.f.s.), if such enlargement of the disposal plants or the treatment of such a volume of the storm water overflows be, in the opinion of the court, necessary to permit the disposition of the sewage of the Sanitary District by other means than lake diversion, said finding of fact is not supported by any competent evidence and is contrary to all the competent evidence in this case; and because, if the Special Master deemed or found that enlargements are necessary in the sewage disposal plants, and/or

that their operation so as to provide at least preliminary treatment for all of the storm water overflows up to the capacity of the intercepting sewers is necessary to provide for or permit "the disposition of the sewage" of the Sanitary District of Chicago "through other means than lake diversion," then. and in that event, he should have found and included in said finding of fact that the enlargement of the sewage disposal plants as proposed in the program of the Sanitary District, and/or the operation of the sewage disposal plants so as to provide at least partial treatment for all of the storm water overflows up to the capacity of the intercepting sewers is part of a practical program for the disposition of the sewage of the Sanitary District of Chicago by other means than lake diversion, and he should have incorporated the enlargement of said sewage disposal plants and/or their operation so as to provide at least preliminary treatment of all of the storm water overflows up to the capacity of intercepting sewers as part of his recommended program "for the disposition of the sewage" of the Sanitary District of Chicago "through other means than lake diversion" in accordance with the mandate of this Court bearing date of January 14, 1929. *Wisconsin et al. vs. Illinois et al.*, 278 U. S. 367.

I-B.

Complainant excepts to that portion of finding of fact First (3) appearing on page 24 of the Report of the Special Master, which reads as follows, to wit:

> "The complainants have not proposed the installation of a separate system of sanitary sewers. When the defendants presented testimony as to their estimates of the extremely heavy, and in their view prohibitive, cost that would be involved in that undertaking (estimated by William R. Matthews, engineer of the Bureau of Sewers of Chicago at over $400,000,000) counsel for complainants stated that complainants'

> program does not provide for any such sewer system; that the defendants had not advanced any program involving the construction of a separate sewer system for Chicago nor had the complainants. * * * As the suggested change does not appear to be regarded as an essential feature, its feasibility may be left to be determined in the course of the actual operations."

because, insofar as said finding of fact finds or implies any concession by complainant that the defendants should not be required to construct a separate system of sanitary sewers if such a system be, in the opinion of the court, necessary to provide for or permit the disposition of the sewage of the Sanitary District of Chicago by other means than lake diversion, said finding of fact is not supported by any competent evidence and is contrary to all the competent evidence in this case; and because, if the Special Master deemed or found that the construction of a separate system of sanitary sewers is necessary to provide for or permit "the disposition of the sewage" of the Sanitary District "through other means than lake diversion," then, and in that event, he should have found and included in said finding of fact that the construction of a separate system of sanitary sewers is practicable, that the testimony of the complainant was that a separate system of sanitary sewers could be constructed for Chicago at a cost of from $158,000,000 to $171,000,000, and that the construction of such a separate system of sanitary sewers is part of a practical program for the disposition of the sewage of the Sanitary District of Chicago by other means than lake diversion; and he should have incorporated the construction of such a separate system of sanitary sewers in and made the construction of such a system of sanitary sewers a part of his recommended program for "the disposition of the sewage" of the Sanitary District of Chicago "through other means than lake diversion" in accordance with the mandate of this Court bearing date of January 14, 1929.

I-C.

Complainant excepts to that portion of finding of fact FIRST (3), appearing on pages 24-25 of the Report of the Special Master made and filed herein, which reads as follows, to-wit:

> "The complainants, however, state that the program they propose does materially differ from the one presented by the Sanitary District in two respects. The first is that the program of the Sanitary District contemplates a continued diversion of a certain amount of lake water, while the complainants propose that there shall be no diversion whatever or any flow at Lockport after the completion of the program. But this difference between the two programs does not relate to the character of the sewage treatment works, as such, but to the disposition of the effluent, a question which will be examined later. The second difference is that the program presented by the complainants provides for the installation of water purification works for all the domestic water supply of the City of Chicago. But the complainants recognize that the construction of such works is not a part of the program for the treatment of the sewage of the Sanitary District and in the findings of fact which the complainants have requested it is stated that, since the construction of water filtration plants is not an indispensable element in the practical disposal of the sewage by means other than lake diversion, the construction of such water purification works should be left to the discretion of the defendants. It also appears that the design and construction of water filtration plants for the City of Chicago is under the jurisdiction of that city which has not been made a party to this suit. Thus, what are stated in the complainants' brief to be the two material differences between the two programs do not relate to the sewage treatment works."

because, insofar as said finding of fact finds or implies any concession by the complainant that the State of Illinois should not be required to install water purification works

for all of the domestic water supply of the City of Chicago, if this Court should consider the installation of water filtration works necessary to provide for or permit the disposition of the sewage of the Sanitary District of Chicago by other means than lake diversion, and insofar as the Special Master found, directly or by implication, that the construction of water filtration works for the domestic water supply of Chicago should be left to the discretion of the defendants regardless of whether the construction of such water filtration works is necessary to provide a practical program for "the disposition of the sewage" of the Sanitary District "through other means than lake diversion," or insofar as the Special Master found, directly or by implication, that the omission of water filtration works from this program by the defendants could be made the basis of any abridgement of the rights of the complainants to have this diversion terminated, said finding is unsupported by any competent evidence, contrary to all the competent evidence and erroneous as a matter of law; and because if the Special Master deemed or found that water filtration works are necessary to provide for or permit "the disposition of the sewage" of the Sanitary District of Chicago "through other means than lake diversion," then, and in that event, he should have found and included in said finding of fact that the construction of water filtration works for the domestic water supply of Chicago is practicable and that the construction of such water filtration works is part of a practical program for "the disposition of the sewage" of the Sanitary District of Chicago "through other means than lake diversion," and he should have incorporated the construction of such water filtration works in and made the construction of such water filtration works a part of his recommended program for "the disposition of the sewage" of the Sanitary District of Chicago "through other means than lake diversion" in accordance with the mandate of this Court bearing date of January 14th, 1929.

I–D.

Complainant excepts to that portion of finding of fact FIRST (3), appearing on page 25 of the Report of the Special Master made and filed herein, which reads as follows, to-wit:

> "The complainants also say that while 'they consider any additions to or modifications of their program, summarized in Exhibit 238, to be wholly unnecessary,' they have pointed out that 'there are several variations which might be incorporated in that program, if Chicago desired to improve the present standard or quality of its water supply, or entertained any honest doubt as to the efficacy of this program from the public health standpoint. These variations are the extension of the present intakes' (for the water supply), 'the substitution of a new intake off the North Shore in the vicinity of Wilmette, chlorination of the sewage effluent and/or the installation of control works at the junction of the drainage canal and the Chicago River.' The complainants say that they do not urge any of these modifications and in their proposed findings they state that the 'construction or installation of any such additional works or structures should be left to the discretion of the defendants.'"

because, insofar as it finds or implies any concession by the complainant that the defendants should not be required to make such variations in the program if this Court should be of the opinion that such variations in the program are necessary to provide for or permit the disposal of the sewage of the Sanitary District of Chicago by other means than lake diversion, it is not supported by any evidence, is contrary to all the evidence and is erroneous as a matter of law; and because, if the Special Master deemed or found that such variations in the program, or any of them, were necessary to provide for the disposal of the sewage of the Sanitary District by other means than lake diversion, then, and in that event, he should have found

that such variations in the program and each of them is practicable, that such variations in the program proposed by the Sanitary District (or such one or ones of such variations as he found to be essential) are parts of a practical program for the disposition of the sewage of the Sanitary District by other means than lake diversion, and that such variations in the program proposed by the Sanitary District could all be made or effected by December 31, 1938, and he should have incorporated all of such variations in the program proposed by the Sanitary District, or such ones of them as he deemed essential, in and made them a part or parts of his recommended program for the disposition of the sewage of the Sanitary District by other means than lake diversion, in accordance with the mandate of this Court bearing date of January 14, 1929.

I-E.

Complainant excepts to that portion of finding of fact THIRD (2), appearing on page 106 of the Report of the Special Master made and filed herein, which reads as follows, to-wit:

> "The complainants' sanitary experts have not testified that these controlling works would not be needed."

because, insofar as it finds or implies that complainant's sanitary experts, or any of them, testified directly or by inference that such controlling works are necessary to permit or would affect the practicability of terminating all flow at Lockport after the completion of complainant's program for the disposition of the sewage of the Sanitary District of Chicago by other means than lake diversion, said finding of fact is unsupported by any competent evidence and contrary to all of the evidence in this case; and because, insofar as said finding of fact finds or implies that the installation of controlling works is necessary to pro-

vide for or permit the disposition of the sewage of the Sanitary District by other means than lake diversion, or that the installation of such controlling works is an essential part of a practical program for the disposition of the sewage of the Sanitary District without diversion, such finding is unsupported by any competent evidence and contrary to all of the competent evidence in this case; and because, insofar as said finding implies that complainant's right to terminate the diversion is dependent upon the construction of controlling works, it is erroneous as a matter of law.

I–F.

Complainant excepts to that portion of finding of fact FOURTH, appearing on page 137 of the Report of the Special Master made and filed herein, which reads as follows, to-wit:

> "The suggestion that outfall sewers or tunnels might be built to take the effluents directly to Lake Michigan has been made in a general way, but the evidence is by no means convincing that it would be a reasonable requirement to compel the Sanitary District or the city to build such sewers or tunnels to take the effluents from the sewage treatment plants across the city to the Lake (*supra*, p. 134). The problem of the storm flow would still remain and would be especially serious in view of the volume which may be expected in the run-off of this large area with its great and growing population."

because said finding of fact is not supported by any competent evidence in this case and is contrary to all the competent evidence in this case; and because, if the Special Master deemed or found that the diversion of the effluents of the sewage disposal plants from the Chicago River and its branches is necessary to provide for or permit the disposition of the sewage of the Sanitary District of Chicago by other means than lake diversion, then, and in that

event, he should have found and included in said finding of fact that the construction of such outfall sewers or tunnels is practical, that such outfall sewers or tunnels can be built and placed in operation before December 31, 1938, and that the construction of such outfall sewers or tunnels is part of a practical program for the disposition of the sewage of the Sanitary District of Chicago by other means than lake diversion; and he should have incorporated the construction of such outfall sewers or tunnels in and made the construction of such sewers or tunnels a part of his recommended program for the disposition of the sewage of the Sanitary District of Chicago by other means than lake diversion in accordance with the mandate of this Court bearing date of January 14, 1929.

I-G.

Complainant excepts to that portion of finding of fact FOURTH, appearing on pages 137-138 of the Report of the Special Master made and filed herein, which reads as follows, to-wit:

> "The pumping of circulating water into the Drainage Canal and the Chicago and Calumet Rivers would, as pointed out in the testimony (*Supra*, p. 135) carry whatever filth there would be in these rivers to the Lake more rapidly. It is not clear that this course would be compatible with the interests of navigation in the Chicago harbor, and that there would be a serious danger of contaminating the water supply and of creating offensive conditions at the bathing beaches of the city is quite evident."

because said finding of fact is immaterial, because insofar as said finding of fact finds or implies that the pumping of circulating water would create any interference with navigation in the Chicago Harbor, it is not supported by any competent evidence in this case, and is contrary to all competent evidence in this case; and because, insofar as

said finding of fact purports to find that the pumping of circulating water would endanger the public water supply, said finding is immaterial, not supported by any competent evidence in the case and contrary to all competent evidence in the case; and because, if the Special Master deemed said finding material or if this Court should be of the opinion that said finding of fact in said respect is material, then, and in that event, the Special Master should have found that the installation of water filtration works for the domestic water supply of the City of Chicago, the extension of the waterworks intakes, the construction of a new water intake and/or the chlorination of the effluents of the sewage disposal plants would provide a full and complete safeguard for the public health; and because, insofar as said finding of fact finds, implies or concludes as a matter of law that any diversion in this case may be allowed for sanitary purposes, it is erroneous as a matter of law.

II.

Complainant excepts to the finding of fact designated as Summary Conclusion No. (9), appearing on page 143 of the Report of the Special Master made and filed herein, which reads as follows, to-wit:

> "(9) That, after the installation of controlling works as above provided, and on the completion of all the sewage treatment works above described, and in the absence of competent action by Congress in relation to navigation lawfully imposing a different requirement, the diversion by the Sanitary District of water from Lake Michigan should not exceed an annual average of 1,500 c.f.s. in addition to domestic pumpage."

because, (1) insofar as said finding finds or implies, either as a finding of fact or a conclusion of law, that the Congress has the power to authorize any diversion from the

Great Lakes-St. Lawrence Watershed to the Mississippi Watershed under the circumstances of this case as against and without the consent of the complainant States, it is erroneous as a matter of law; (2) and because, insofar as said finding of fact finds or implies that controlling works are an essential part of a practical program for the disposition of the sewage of the Sanitary District by other means than lake diversion, said finding of fact is not supported by any competent evidence in this case and is contrary to all the competent evidence in this case; (3) and because, insofar as said findings of fact finds or implies or concludes as a matter of law that the Sanitary Canal is a part of the navigable waters of the United States and subject to the jurisdiction of the Secretary of War so as to require his authorization or consent for the construction of controlling works therein, said finding or conclusion is not supported by any competent evidence in this case, is contrary to all the competent evidence in this case and is erroneous as a matter of law; (4) and because, insofar as said finding either as a finding of fact or conclusion of law, finds, concludes or implies that controlling works are an essential part of a practical program for the disposition of the sewage of the Sanitary District by other means than Lake diversion, and that the authorization, consent or approval of the Secretary of War is necessary to their installation or erection, the effect of said finding, conclusion or implication is to delegate or leave to the Secretary of War the determination of when, or whether at all, the relief which complainant was awarded by the decision of this Court dated January 14, 1929, shall be effective, of when, or whether at all, the rights which this Court adjudged in this complainant shall be secured to it and to transfer the functions of this Court in the adjudication of this cause to the Secretary of War; (5) and because to the extent that said finding of fact finds or implies that any diversion of water from Lake Michigan

or flow of water at Lockport is necessary to maintain navigation in the Chicago River as part of the Port of Chicago, said finding is not supported by any competent evidence in this case and is contrary to all the competent evidence in this case; (6) and because to the extent that said finding of fact finds or implies as a fact or concludes as a matter of law that any flow at Lockport is necessary or legally admissible to maintain navigation in the Chicago River as a part of the Port of Chicago, said finding of fact or conclusion of law is not supported by any competent evidence in this case, is contrary to all the evidence in this case and is erroneous as a matter of law; (7) and because the Special Master should have found as a fact and concluded as a matter of law that on and after the completion of the sewage treatment works described in his Summary Conclusions numbered 1 and 4, appearing on pages 141 and 142 of the Report of the Special Master on Re-Reference, no flow or diversion from the Great Lakes-St. Lawrence Watershed should be maintained by the Sanitary District of Chicago.

As ancillary to and in support of the foregoing exception, complainant takes the following detailed exceptions to findings contained in the Master's Report:

II-A.

Complainant excepts to finding of fact designated as Summary Conclusion No. (6), appearing on pages 142-143 of the Report of the Special Master made and filed herein, which reads as follows, to-wit:

> (6) That subject to the approval of the Secretary of War upon the recommendation of the Chief of Engineers, pursuant to the applicable statute, controlling works should be constructed by the Sanitary District for the purpose of preventing reversals of the Chicago River at times of storm and the introduction of storm flow into Lake Michigan; that for this purpose the Sanitary District should immediately submit plans for such works to the Chief of Engineers of the War De-

partment; and that such controlling works should be constructed by the Sanitary District within two years after receiving the authorization of the Secretary of War.

because, insofar as said finding of fact finds or implies that controlling works are an essential part of a practical program for the disposition of the sewage of the Sanitary District by other means than lake diversion, such finding is not supported by any competent evidence in this case and is contrary to all the competent evidence in this case; because, insofar as said finding of fact finds or implies as a fact or concludes as a matter of law that the Drainage Canal is part of the navigable waters of the United States so as to be subject to the jurisdiction of the Secretary of War and to require his authorization and consent for the installation of controlling works therein, said finding of fact is not supported by any competent evidence in this case, is contrary to all competent evidence in this case and is erroneous as a matter of law, and because the effect of said finding of fact or conclusion of law is to delegate or leave to the discretion of the Secretary of War the determination of when, or whether at all, the relief which complainant was awarded by the decision of this Court in this case dated January 14, 1929, shall be effective and of when or whether at all the rights which this Court adjudged in this complaint shall be secured to it.

II-B.

Complainant excepts to the finding of fact designated as Summary Conclusion No. (7), appearing on page 143 of the Report of the Special Master made and filed herein, which reads as follows, to-wit:

"(7) That when such controlling works have been constructed, the diversion by the Sanitary District of water from Lake Michigan should not exceed the annual average of 5,000 c.f.s. in addition to domestic pumpage."

for the reasons which are set forth in detail in the preceding exception designated as II-A.

II-C.

Complainants and each of them except to that portion of finding of fact FOURTH, appearing on pages 121-122 of the Report of the Special Master made and filed herein, which reads as follows, to-wit:

> "But, as there is no means known at present of otherwise disposing of the effluent from the sewage treatment plants, when the sewage disposal program has been fully carried out, it is assumed that the effluent must be turned into the Drainage Canal and Chicago River, thence to be discharged at Lockport, the western terminus of the Canal, or be carried into Lake Michigan. The question of the disposition of the effluent from the sewage treatment plants thus demands consideration in connection with the award of relief as to the diversion by the Sanitary District."

because, insofar as said finding of fact finds that there is no means known at present of otherwise disposing of the effluent from the sewage treatment plants than discharging it into the Drainage Canal and Chicago River, said finding of fact is not supported by any evidence in this case and is contrary to all the competent evidence in this case that it is clearly practicable under the evidence in this case to discharge the effluent through outfall sewers or tunnels to remote places in Lake Michigan and wholly divert them from the Chicago River and the Drainage Canal; and because, insofar as said finding of fact finds as a fact or concludes as a matter of law that the disposition of the effluent from the sewage treatment plants controls, limits or abridges the relief to which complainant is entitled under the decision of January 14, 1929, said finding or conclusion is not supported by any competent evidence, is contrary to all the competent evidence in this case and is erroneous as a matter of law.

II-D.

Complainant excepts to that portion of finding of fact FOURTH, on page 122 of the Report of the Special Master made and filed herein, which reads as follows, to-wit:

> "It is pointed out by the defendants, however, that the Drainage Canal is actually connected with what is called the Illinois Waterway (which is under improvement by the State of Illinois under the authority of a permit of the Secretary of War) and that there is now through navigation. This navigation appears to be at present of slight volume and importance, consisting of pleasure craft, but such as it is it would be cut off by a complete stoppage of flow at Lockport."

because, insofar as said finding of fact implies or finds or concludes as a matter of law that the Illinois Waterway is being constructed under authority from the Secretary of War, or that the Secretary of War would have jurisdiction to authorize the construction of said Waterway, or that the Congress would have power to authorize any diversion from the Great Lakes-St. Lawrence Watershed for such a Waterway without the consent of the complainant states, such finding or conclusion is not supported by any evidence in this case, is contrary to all evidence in this case and is erroneous as a matter of law.

II-E.

Complainant excepts to that portion of finding of fact FOURTH, appearing on pages 126-127 of the report of the Special Master made and filed herein, which reads as follows, to-wit:

> "There is still the question as to the conditions which will exist in relation to navigation in the Chicago River as a part of the Port of Chicago, because of the introduction of the effluent from the sewage treatment works and the untreated sewage carried into the river at times of storm, after the proposed program as sub-

> stantially approved by the complainants, so far as sewage treatment is concerned has been completed. That pollution caused by the introduction of sewage has relation to the interests of navigation was recognized by this Court in the case of *New York v. New Jersey*, 256 U. S. 296, 397, 398, cited by the Court in referring to the exigency which confronted the Secretary of War when he gave the permit of March 3, 1925 (278 U. S., p. 418). The fact that at that time the Sanitary District had been direlict, and that the preent question relates to the conditions which will exist after the sewage has been treated so far as practicable from the standpoint of sanitary engineering knowledge, can not be deemed to change the conception of the interests of navigation or the need of their appropriate protection."

because, insofar as said finding finds or implies as a fact or concludes as a matter of law that the discharge of liquid sewage or the effluent of sewage treatment plants into any of the navigable waters of the United States constitutes an interference with or obstruction to navigation or an obstruction of navigable capacity, said finding or conclusion is not supported by any competent evidence in this case, is contrary to all competent evidence in this case and is erroneous as a matter of law; and because, insofar as said finding of fact finds as a fact or concludes as a matter of law that if the discharge of the effluent from the sewage treatment works and the discharge of the storm water overflow into the Chicago River were injurious to navigation, the defendants would not be required to remedy that condition by pumping circulating water, by discharging the effluent elsewhere through outfall sewers and/or constructing a separate system of sanitary sewers instead of attempting to found a right to divert water to the damage of the complainant upon conditions thus created by the defendants, such finding or conclusion is not supported by any competent evidence, is contrary to all competent evidence and is erroneous as a matter of fact.

II-F.

Complainant excepts to finding of fact First, Conclusion (3), appearing on page 35 of the Report of the Special Master made and filed herein, which reads as follows, to-wit:

> "(3) That the remainder of the storm flow, in excess of the volume treated in the sewage treatment plants, will pass into the Chicago River and its branches, and into the canals of the Sanitary District, and any storm flow so passed into the river, its branches and the canals, will contain sewage and wastes which have not been treated by the sewage treatment works."

because said finding of fact is immaterial and because if this court should be of the opinion that said finding is material, then, and in that event, the Master should have found that any untreated sewage and waste passing into the Chicago River and its auxiliary channels with storm water overflow will be diluted with an immense volume of water and innocuous, and that the degree of such dilution and its effect on navigation, if any, will be the same whether the storm water overflow flows westward through the Chicago River toward Lockport, or flows eastward through the Chicago River toward Lake Michigan.

II-G.

Complainant excepts to that portion of finding of fact Fourth, appearing on page 137 of the Report of the Special Master made and filed herein, which reads as follows, to-wit:

> "While the residual organic matter in the effluent may be very different from an equal percentage of the raw sewage as a potential source of nuisance, it is far from demonstrated, in my judgment, that with all flow stopped at Lockport, the concentration of such a vast volume of effluent as will flow from the proposed

> sewage plants together with the untreated sewage and wastes carried wit'. the storm flow into the limited channels of the Drainage Canal and Chicago River will not create conditions in these channels seriously detrimental to navigation.''

because said finding of fact is not supported by the competent evidence in this case and is contrary to all the competent evidence in this case; because if the Special Master were of the opinion that said finding of fact was supported by competent evidence in this case, then, and in that event, he should have found and included in said finding of fact a finding that it was practicable and feasible to prevent any possibility of interference with navigation in said channels either by discharging the effluent of the sewage treatment plants through outfall tunnels directly into the Lake, or by pumping circulating water through the various channels of the District and/or by construction of a separate system of sanitary sewers; because said finding of fact erroneously assumes that the burden of proof was upon the complainants to show that under the program proposed by the defendants, no conditions would be created which would be detrimental to navigation, without diversion, whereas in law the burden was upon the defendants to establish such facts, if they existed, as an equitable defense *pro tanto* to the rights of the complainant as declared by this Court in its decision of January 14, 1929.

II-H.

As ancillary to and in support of its exception No. II, complainant renews its ancillary exceptions under Exception I, designated respectively as Exceptions No. I-F and No. I-G.

II-I.

Complainant excepts to that portion of finding of fact FOURTH, appearing on page 138 of the Report of the

Special Master made and filed herein, which reads as follows, to-wit:

> "But if the effluent from the sewage treatment plants and the storm water are to be discharged through the Drainage Canal at Lockport, it is well established that some flow from the Lake will be required. This it appears should not be less than a mean annual diversion of 1,000 c.f.s., in addition to pumpage; and it does not at present appear that it is necessary that the diversion should exceed a mean annual amount of 1,500 c.f.s., in addition to pumpage.
>
> My conclusion is that, so far as the question can be determined at this time, the interests of navigation in the Chicago River as a part of the Port of Chicago, when the above described sewage treatment program has been carried out, will require that the flow of the Drainage Canal be discharged at Lockport, and that for this purpose there will be necessary a diversion of water from Lake Michigan of an annual average of not less than 1,000 c.f.s., and that it would be safer to allow a mean annual diversion of 1,500 c.f.s., in addition to pumpage."

because, insofar as said finding of fact finds as a fact, or concludes as a matter of law, that it is necessary, or legally admissible in the interests of navigation in the Chicago River as part of the Port of Chicago to discharge the effluent of the sewage treatment works and the storm water through the Drainage Canal at Lockport without the consent of the complainant, said finding and conclusion is not supported by the competent evidence in this case, is contrary to all the competent evidence in this case, and is erroneous as a matter of law; and because insofar as said finding of fact finds as a fact, or concludes as a matter of law, that any flow at Lockport, is required or is legally admissible in the interests of navigation in the Chicago River as part of the Port of Chicago, such finding or conclusion is not supported by the competent evidence in this case, is contrary to all the competent evidence in this case,

and is erroneous as a matter of law; and because said finding is immaterial in that it fails to state whether any flow is necessary to *maintain* navigation in the Chicago River as a part of the Port of Chicago.

II-J.

The complainant excepts to the finding of fact designated as Summary Conclusion No. 11, appearing on page 144 of the Report of the Special Master made and filed herein, which reads as follows, to-wit:

> "(11) That provision should be made in the decree for an examination of results after the completion of the sewage treatment works so that there may be such further or other relief in respect to the diversion of water from Lake Michigan as may be found to be feasible."

because, insofar as said finding finds or implies as a fact or concludes as a matter of law that any diversion or flow at Lockport may be maintained by the Sanitary District as against this complainant after the completion of the practical program for the disposition of the sewage of the Sanitary District without diversion, such finding or conclusion is not supported by the competent evidence in this case, is contrary to all the competent evidence in this case, and is erroneous as a matter of law.

III.

Complainant excepts to the finding of fact or conclusion of law appearing in the Summary at page 145 of the Report of the Special Master made and filed herein, which reads as follows, to-wit:

> "No recommendation is made as to costs."

because the Special Master should have found or concluded as a matter of law that the complainant is entitled to have and recover from the Sanitary District of Chicago and the

State of Illinois its costs and disbursements herein, and that the fees of the Special Master, as fixed and allowed by this Court, should be taxed against the defendants, the Sanitary District of Chicago and the State of Illinois, as part of the costs herein.

EXCEPTIONS TO FAILURE OR REFUSAL OF SPECIAL MASTER TO GRANT FINDINGS OF FACT REQUESTED BY OR ON BEHALF OF COMPLAINANTS.

IV.

Complainant excepts to the failure or refusal of the Special Master to find or grant complainant's requested finding of fact No. 6, appearing on page 5-6 of Complainant's Requested Finding of Fact, which reads as follows, to-wit:

> "While the completion of said sewage disposal plants, with chlorination only of the domestic water supply as presently practiced, will undoubtedly provide as good a water supply as presently obtains and one which is adequate to safeguard the public health, the construction of water filtration plants for the filtration of the entire domestic water supply of Chicago would be a further factor of safety or protection to the public health and would unquestionably provide a safe public water supply. In the present state of the art a comprehensive and scientifically sound program for the sanitation of Chicago should include the construction of water filtration works for the domestic water supply. Since the construction of water filtration plants is not an indispensable element in the practical disposal of the sewage of the Sanitary District of Chicago by means other than Lake diversion, the construction of such water purification works should be left to the discretion of the defendants."

Complainant excepts to the failure or refusal of the Special Master to find or grant complainant's requested finding of fact No. 9, appearing on page 7 of Complainant's

Requested Findings of Facts, which reads as follows, to-wit:

V.

"If Chicago desires to improve the present standard or quality of its water supply, or to provide any additional factors of safety in the case of a breakdown in any of the plants for the disposal of the sewage by artificial processes, it would be practicable to extend the present water intakes farther into the Lake, to substitute a new water intake off the North Shore about 20 miles from the mouth of the Chicago River in the vicinity of Wilmette, to chlorinate the effluents from the sewage disposal plants and/or install controlling works at the junction of the Drainage Canal and the Chicago River, which would permit almost immediate diversion from the Lake in the case of an emergency. None of the foregoing variations in the program for the practical disposal of the sewage of the Sanitary District of Chicago by means other than Lake diversion is essential. The construction or installation of any such additional works or structures should be left to the discretion of the defendants."

VI.

Complainant excepts to the failure or refusal of the Special Master to find or grant complainants' requested finding of fact No. 13, appearing on page 8 of Complainants Requested Findings of Fact, which reads as follows, to-wit:

"Upon the completion of this program of practical measures for the disposal of the sewage of the Sanitary District of Chicago by means other than Lake diversion, no diversion of flow at Lockport will be necessary to maintain navigation upon the Chicago River as part of the Port of Chicago. Navigable depths will be increased and no nuisance will be created which will obstruct or interfere with navigation."

VII.

Complainant excepts to the failure or refusal of the Special Master to find or grant complainants' requested

finding of fact No. 14, appearing on pages 8-9 of Complainant's Requested Findings of Fact, which reads as follows, to-wit:

> "Upon the completion of this program of practical measures for the disposal of sewage of the Sanitary District of Chicago by means other than Lake diversion, it is practicable to flush the navigable channels of the Chicago and Calumet Rivers together with the auxiliary channels by pumping circulating water through the North Branch by means of the existing pumping station near Wilmette, by pumping water into the South fork of the Chicago River or into the Chicago Drainage Canal by means of the existing pumping station at 39th Street and by pumping water through the Calument-Sag Channel so that such flushing water would mingle with the effluents of the sewage disposal plants and proceed out into the Lake with no flow at Lockport. While this procedure is not necessary it is entirely practicable and would afford an adequate factor of safety, if desired, for the prevention of any possibility of interference with navigation in these channels."

VIII.

Complainant excepts to the failure or refusal of the Special Master to find or grant complainants' requested finding of fact No. 15, appearing on page 9 of Complainants' Requested Findings of Fact, which read as follows, to-wit:

> "With the completion of this program of practical measures for the disposal of the sewage of the Sanitary District of Chicago by means other than Lake diversion, it is practicable to discharge the effluents of all of the sewage disposal plants involved in this program through outfall sewers or tunnels directly into Lake Michigan so as to wholly remove the said effluents from the Chicago River and its branches and auxiliary channels in the Sanitary District of Chicago. While such procedure is not necessary, it is entirely practicable and affords an adequate factor of safety, if desired, for the prevention of any possibility of interference with navigation in said waters."

EXCEPTIONS TO FAILURE OR REFUSAL OF SPECIAL MASTER TO GRANT COMPLAINANTS' REQUESTED CONCLUSIONS OF LAW.

IX.

Complainant excepts to the failure or refusal of the Special Master appointed herein to grant complainants' requested conclusion of law No. (7) appearing on pages 11-12 of Complainants' Requested Findings of Fact, Conclusions of Law and Recommendations for a Decree, which reads as follows, to-wit:

> "That the discharge of liquid sewage or street wash into any of the navigable waters of the United States does not constitute an obstruction to or interference with navigation or impairment of navigable capacity as a matter of Law."

X.

Complainant excepts to the failure or refusal of the Special Master appointed herein, to grant complainants' requested conclusion of law No. 9, appearing on page 12 of Complainants' Requested Findings of Fact, Conclusions of Law and Recommendations for a Decree, which reads as follows, to-wit:

> "That upon the completion of the program of practical measures for the disposition of the sewage of the Sanitary District of Chicago by other means than Lake diversion, no diversion or flow at Lockport from the Great Lakes-St. Lawrence watershed may be lawfully maintained by the defendants, either in interest of the sanitation of Chicago or for the maintenance of navigation on the Chicago River as part of the Port of Chicago."

XI.

Complainant excepts to the failure or refusal of the Special Master appointed herein, to grant complainants' requested conclusion of law No. 12, appearing on page 13

of the Complainants' Requested Findings of Fact, Conclusions of Law and Recommendations for a Decree, which reads as follows, to-wit:

> "That defendants should be required by the terms of the decree to provide for the discharge of effluents from the sewage disposal plants involved in the practical program for the disposal of the sewage by other means than Lake diversion, by such methods as will remove all of said effluents from the Chicago River and the navigable channels of the Sanitary District of Chicago and provide for the discharge of such effluents into Lake Michigan or elsewhere in such manner and at such places as will not create any obstruction to or interference with navigation on or the navigable capacity of any of the navigable waters of the United States."

Complainant hereby tenders a form of decree to carry out the exceptions herein taken to the Report of the Special Master, which form of decree is as follows:

COMPLAINANTS' REQUESTED FORM OF DECREE
(after formal parts and modifications of findings.)

1. The Court finds that there are practical measures for the disposition of the sewage of the Sanitary District of Chicago through other means than lake diversion, and that the adoption, completion and operation of such practical measures, will make it practicable to terminate all flow at Lockport (other than domestic pumpage) from the Great Lakes-St. Lawrence Watershed to the Mississippi Watershed, with due regard for the maintenance of navigation in the Chicago River as part of the Port of Chicago.

2. The Court finds that practical measures for the disposition of the sewage of the Sanitary District of Chicago through other means than Lake diversion can be so far completed and placed in operation on or before July 1, 1930, as to make it practicable (with due regard for the sanitary emergency and for the maintenance of navigation

in the Chicago River as part of the Port of Chicago) to reduce the diversion or flow at Lockport to an annual average not exceeding 6500 c.f.s. in addition to domestic pumpage.

3. The Court finds that on and after July 1, 1930, the diversion or flow from the Great Lakes-St. Lawrence Watershed to the Mississippi Watershed, which is maintained at Lockport by the Sanitary District of Chicago, should be reduced to an annual average not exceeding 6500 c.f.s. in addition to domestic pumpage.

4. The Court finds that practical measures for the disposition of the sewage of the Sanitary District of Chicago through other means than lake diversion can be so far completed and placed in operation on or before December 31, 1935 as to make it practicable (with due regard for the sanitary emergency and for the maintenance of navigation in the Chicago River as part of the Port of Chicago) to reduce the diversion or flow from the Great Lakes-St. Lawrence Watershed to the Mississippi Watershed, which is maintained at Lockport by the Sanitary District of Chicago, to an annual average not exceeding 5000 c.f.s. in addition to domestic pumpage.

5. The Court finds that on and after December 31, 1935, the diversion or flow from the Great Lakes-St. Lawrence Watershed to the Mississippi Watershed, which is maintained at Lockport by the Sanitary District of Chicago, should be reduced to an annual average not exceeding 5000 c.f.s. in addition to the domestic pumpage.

6. The Court finds that all practical measures necessary wholly to provide for the disposition of all of the sewage of the Sanitary District of Chicago through other means than lake diversion and to permit the termination of all flow at Lockport (other than domestic pumpage) from the Great Lakes-St. Lawrence Watershed to the Mississippi Watershed, with due regard for the maintenance of navigation in the Chicago River as part of the Port of Chicago,

can be wholly completed and placed in full operation on or before December 31, 1938.

NOW, THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED:

1. That on or before July 1, 1930, the defendants so far complete and place in operation practical measures for the disposition of the sewage of the Sanitary District of Chicago through other means than lake diversion as will make it practicable (with due regard for the maintenance of navigation in the Chicago River as part of the Port of Chicago) to reduce the diversion or flow, which the Sanitary District maintains at Lockport, to an annual average not exceeding 6500 c.f.s. in addition to domestic pumpage.

2. That on or before December 31, 1935, the defendants so far complete and place in operation practical measures for the disposition of the sewage of the Sanitary District of Chicago through other means than Lake diversion as will make it practicable (with due regard for the maintance of navigation in the Chicago River as part of the Port of Chicago) to reduce the diversion or flow which the Sanitary District maintains at Lockport to an annual average not exceeding 5000 c.f.s. in addition to domestic pumpage.

3. That on or before December 31, 1938, the defendants complete and place in full operation all practical measures necessary wholly to provide for the disposition of all of the sewage of the Sanitary District of Chicago through other means than lake diversion and to permit the termination of all flow at Lockport (other than domestic pumpage) from the Great Lakes-St. Lawrence Watershed to the Mississippi Watershed.

4. That on and after July 1, 1930, the defendants. the State of Illinois and the Sanitary District of Chicago, their employees and agents, and all persons assuming to act under the authority of either of them, be and they hereby are enjoined from diverting any of the waters of the Great Lakes-St. Lawrence System or Watershed through the Chicago Drainage Canal and its auxiliary channels or other-

wise in excess of an annual average of 6,500 c.f.s. in addition to domestic pumpage.

5. That on and after December 31, 1935, the defendants, the State of Illinois and the Sanitary District of Chicago, their employees, servants, attorneys, agents and any or all persons assuming or purporting to act under their authority or under the authority of either of them be, and they hereby are, ordered to desist and refrain from diverting or abstracting any of the waters of the Great Lakes-St. Lawrence System or Watershed through the Chicago Drainage Canal and its auxiliary channels, or through or by means of any other method, device or agency in excess of 5000 c.f.s. in addition to domestic pumpage.

6. That on and after December 31, 1938, the defendants, State of Illinois and the Sanitary District of Chicago, their employees, servants, attorneys, agents and any or all persons assuming or purporting to act under their authority or under the authority of either of them be, and they hereby are, ordered to desist and refrain from diverting or abstracting any of the waters of the Great Lakes-St. Lawrence System or Watershed or maintaining any flow therefrom into the Mississippi Watershed (other than domestic pumpage) through the Chicago Drainage Canal and its auxiliary channels, or through or by means of any other method, device or agency.

7. That on and after December 31, 1938, the defendants, the State of Illinois and the Sanitary District of Chicago, their employees, servants, attorneys, agents and any and all persons assuming or purporting to act under their authority or under the authority of either of them be, and they hereby are, ordered to desist and refrain from discharging sewage or the effluent of sewage disposal plants at such place or places and/or in such manner or by such methods as to so pollute the Chicago River and the auxiliary navigable channels of the Sanitary District of Chicago or any other of the navigable waters of the United States to such an extent as to create an obstruction to or in-

terference with navigation or the navigable capacity of any of the navigable waters of the United States.

8. That, pending the completion of the practical measures for the disposition of the sewage through other means than lake diversion, the defendants, the Sanitary District of Chicago and the State of Illinois, shall file with the clerk of this Court semi-annually on July first and January first of each year, beginning July first, 1930, a report to this Court adequately setting forth the progress made in the construction of the sewage treatment plants and appurtenances outlined in the program as proposed by the Sanitary District of Chicago and the progress made on all other structures or measures necessary to provide for the disposition of the sewage of the Sanitary District through other means than lake diversion, and also setting forth the extent and effects of the operation of the sewage treatment plants, respectively, that shall have been placed in operation, and also the average diversion of water from Lake Michigan during the period from the entry of this decree down to the date of such report.

9. That the complainants have and recover from the Sanitary District of Chicago and the State of Illinois their costs and disbursements herein to be taxed and noted at the foot of this decree, including the fees of the special Master hereby fixed at ..... Dollars.

BY THE COURT:

.....

Clerk of the Supreme Court of United States of America.

Respectfully submitted,

HAMILTON WARD,
Attorney General of New York State
THOMAS PENNEY, JR.,
First Assistant Attorney General of New York.
Solicitors for Complainant.